# Battleship

To create a program that will execute a two player game. Each player will have five ships. An aircraft carrier, a battleship, a cruiser, a submarine and a destroyer. Each ship has specific lengths. 5, 4, 3, 3, and 2 respectively. They will be placed on a board that is 10 x 10. They cannot be placed diagonally or next to each other on the 10 x 10 board. The ships will be placed one at a time by the players who will enter two coordinates one each for the extreme ends of the ship being placed. Player 1 will place all their ships then player two will place all their ships

The game board will be represented by letters A-F on the y axis and 1 – 10 on the x axis. A coordinate will be represented by a combination of a letter and a number (i.e. A10)

Each player will have their own game board and a blank game board representing the opponents sea zone.

Example below of game board. Each player will have their sea zone with the positions of their ships visible, and a blank board representing the opponent’s sea zone where hits and misses can be recorded for each player as they take shots.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| A |  |  |  |  |  |  |  |  |  |  |
| B |  |  |  |  |  |  |  |  |  |  |
| C |  |  |  |  |  |  |  |  |  |  |
| D |  |  |  |  |  |  |  |  |  |  |
| E |  |  |  |  |  |  |  |  |  |  |
| F |  |  |  |  |  |  |  |  |  |  |
| G |  |  |  |  |  |  |  |  |  |  |
| H |  |  |  |  |  |  |  |  |  |  |
| I |  |  |  |  |  |  |  |  |  |  |
| J |  |  |  |  |  |  |  |  |  |  |

Turns will go as follows:

Player 1 will enter a coordinate (i.e. B4) for a guess as to where an opponents ship is. If the guess is a hit the player gets a mark on their copy of their opponents board with an H for hit. It will be an M for a miss should an opponents ship not be present in that location.

Player 2 will follow the same procedure to take a shot at their opponents ships.

Once a ship is sunk (all existing points on the ship are hit) the player will be notified and gameplay will continue.

A player will win once all ships have been sunk.